LISTING OF THE CLAIMS

The following listing, if entered, replaces all prior versions of the claims in the present application.

1.   **(Currently Amended)** A system comprising:

a virtual link bundle comprising a plurality of communication links, wherein

a first end of each of the communication links is configured to be coupled to a first network device;

a second end of ~~each of~~ a first one of the communication links is configured to be coupled to a first virtual network device sub-unit within a virtual network device;

a second end of ~~each of~~ a second one of the communication links is configured to be coupled to a second virtual network device sub-unit within the virtual network device;

the first one of the communication links and the second one of the communication links provide redundant connections between the first network device and the first virtual network device;

the first network device comprises a plurality of ports;

each of the ports <u>is</u> configured to communicate packets with a respective client;

the first network device is configured to append a header to a packet before sending the packet to the virtual network device via one of the communication links; and

the header identifies a one of the ports having received the packet.

2.   (Original) The system of claim 1, further comprising the first network device, wherein

the first network device is configured to select a communication link of the plurality of communication links on which to send a particular packet.

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3.   (Original) The system of claim 2, wherein

        each packet sent between the virtual network device and the first network device

            is sent via only a one of the communication links.

4.   (Canceled)

5.   (Original) The system of claim 1, further comprising the first virtual network

device sub-unit, wherein

        the first virtual network device sub-unit is configured to identify whether a one of

            the communication links is coupled to another virtual network device sub-

            unit within the virtual network device.

6.   (Original) The system of claim 1, further comprising the first virtual network

device sub-unit and the second virtual network device sub-unit, wherein

        the first virtual network device sub-unit and the second virtual network device

            sub-unit are configured to communicate packets with each other via a

            virtual network device link.

7.   (Original) The system of claim 1, wherein

        the communication links are configured to be managed as a single link.

8.   **(Currently Amended)** A system comprising:

        a first virtual network device sub-unit comprising:

            a first interface; and

            a controller coupled to the first interface and configured to forward

                packets received via the first interface, wherein

                the first interface is identified by a first logical identifier,

                a second interface is identified by the first logical identifier,

                an interface bundle comprises the first interface and the second

                    interface,

the second interface is comprised in a second virtual network

device sub-unit,

the controller is configured to detect whether a packet was

received via a virtual network device link, and

the first interface is configured to ~~filter a~~ **drop the** packet

from a packet flow being sent via the first interface

if the packet was received via the virtual network

device link.

9.   (Original) The system of claim 8, further comprising the second virtual network device sub-unit.

10.   (Original) The system of claim 9, wherein

the first virtual network device sub-unit is configured to maintain consistent

forwarding information with the second virtual network device sub-unit.

11.   (Original) The system of claim 10, wherein

the controller is configured to perform control protocol processing for the first

interface according to a routing protocol running on the interface bundle,

the controller is configured to provide information generated when performing the

control protocol processing to a secondary controller comprised in the

second virtual network device sub-unit, and

the secondary controller is configured to use the information to manage the

second interface.

12.   (Previously Presented) The system of claim 8, wherein

the controller is configured to lookup a destination address of a first packet in a

lookup table, and

if the lookup table returns the first logical identifier, the first virtual network

device sub-unit is configured to prioritize sending the first packet via the

first interface over sending the first packet via the second interface.

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13.   (Previously Presented) The system of claim 12, wherein

      if the lookup table returns the first logical identifier, the first virtual network

          device sub-unit is configured to send the first packet via the first interface

          instead of sending the packet via the second interface, unless one or more

          of the first interface and a link coupled to the first interface are failed.

14.   (Original) The system of claim 13, wherein

      the first virtual network device sub-unit comprises a plurality of interfaces,

      more than one of the interfaces are each comprised in the interface bundle, and

      the more than one of the interfaces comprises the first interface.

15.   (Previously Presented) The system of claim 14, wherein

      if each respective communication link coupled to the more than one of the

          interfaces fails, the first virtual network device sub-unit is configured to

          forward the first packet via the second interface comprised in the second

          virtual network device sub-unit.

16.   (Original) The system of claim 8, wherein

      the first virtual network device sub-unit is coupled to the second virtual network

          device sub-unit by a virtual network device link.

17.   (Previously Presented) The system of claim 16, wherein

      the first virtual network device sub-unit is configured to learn that a source

          address of a second packet is behind the first interface, in response to

          receiving the second packet via the virtual network device link.

18.   (Canceled)

19.   **(Currently Amended)** A system comprising:

      a virtual link bundle;

a first virtual network device sub-unit, **wherein**

> **the first virtual network device sub-unit is configured to detect**
>
> > **whether a packet was received via a virtual network device**
> >
> > **link**; and

a second virtual network device sub-unit, wherein

> a first interface of the first virtual network device sub-unit is coupled to
>
> > the virtual link bundle,
>
> a second interface of the second virtual network device sub-unit is coupled
>
> > to the virtual link bundle,
>
> each of the first interface and the second interface is identified by a first
>
> > logical identifier, and
>
> the first interface is configured to ~~filter a second~~ **drop the** packet from a
>
> > packet flow being sent via the first interface if the ~~second~~ packet
> >
> > was received via the virtual network device link.

20.   (Original) The system of claim 19, further comprising:

a network device coupled to the first virtual network device sub-unit and the

> second virtual network device sub-unit by the virtual link bundle.

21.   (Original) The system of claim 20, wherein

the network device is configured to use a hash-based load-sharing algorithm to

> select one of a plurality of communication links comprised in the virtual
>
> link bundle, and

the network device is configured to send a packet via the selected one of the

> communication links.

22.   (Original) The system of claim 19, wherein

a primary controller comprised in the first virtual network device sub-unit is

> configured to perform control protocol processing for the first interface
>
> according to a routing protocol running on the virtual link bundle,

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the primary controller is configured to send information generated by performing the control protocol processing to a secondary controller comprised in the second virtual network device sub-unit, and

the secondary controller is configured to use the information to manage the second interface.

23. (Original) The system of claim 19, wherein

the first virtual network device sub-unit is configured to lookup a destination address of a packet in a lookup table, and

if the lookup table returns the first logical identifier, the first virtual network device sub-unit is configured to prioritize sending the packet via the first interface over sending the packet via the second interface.

24. (Original) The system of claim 23, wherein

each of a plurality of interfaces comprised in the first virtual network device sub-unit is coupled to a respective communication link comprised in the virtual link bundle, and

the interfaces comprise the first interface.

25. (Original) The system of claim 24, wherein

if each respective communication link coupled to the interfaces fails, the first virtual network device sub-unit is configured to send the packet via the second interface comprised in the second virtual network device sub-unit.

26. (Original) The system of claim 23, wherein

the first virtual network device sub-unit is coupled to the second virtual network device sub-unit by a virtual network device link.

27. (Original) The system of claim 26, wherein

the first network device is configured to learn that a source address of a packet is

behind the first interface, in response to receiving the packet via the virtual

network device link.

28-37. (Canceled)

38. (Previously Presented) A method comprising:

sending a first packet via a first link of a virtual link bundle if a destination

identifier associated with the first packet identifies the virtual link bundle;

and

sending a second packet via a second link of the virtual link bundle if a

destination identifier associated with the second packet identifies the

virtual link bundle, wherein

a single network device performs both the sending the first packet and the

sending the second packet,

the first link is coupled to a first virtual network device sub-unit, and

the second link is coupled to a second virtual network device sub-unit.

39. (Original) The method of claim 38, further comprising:

selecting the first link from a plurality of links comprised in the virtual link

bundle, wherein

the selecting comprises performing a hash-based algorithm.

40. (Original) The method of claim 39, further comprising:

appending a header to the first packet, wherein

the header identifies which port of a plurality of ports received the first

packet, and

the sending the first packet via the first link comprises sending the header

via the first link.

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41.   **(Currently Amended)** A method comprising:

receiving a packet, wherein

a destination identifier for the packet identifies an interface bundle, and

the interface bundle comprises a first interface; and

detecting whether the packet was received via a virtual network device link;

~~filtering~~ dropping the packet from a packet flow being sent via the first interface

if the packet was received via [[a]] the virtual network device link.

42.   (Original) The method of claim 41, further comprising:

sending the packet via the first interface if the packet was not received via the

virtual network device link.

43.   (Original) The method of claim 42, further comprising:

maintaining consistency between a lookup table comprised in a first virtual

network device sub-unit and a second lookup table comprised in a second

virtual network device sub-unit.

44.   (Original) The method of claim 42, further comprising

performing control protocol processing for the interface bundle at a primary

controller comprised in a first virtual network device sub-unit, wherein

the first interface is comprised in the first virtual network device sub-unit.

45.   (Original) The method of claim 44, further comprising:

managing a second interface of the second virtual network device sub-unit in

response to information generated by the performing the control protocol

processing, wherein

the second interface is comprised in the interface bundle.

46.   (Original) The method of claim 45, further comprising:

  looking up a destination address of a second packet in a lookup table, and

  if the lookup table returns the destination identifier, sending the sending packet

    via the first interface of the first virtual network device sub-unit instead of

    sending the packet via the second interface of the second virtual network

    device sub-unit.

47.   (Original) The method of claim 41, further comprising:

  learning that a source address of the packet is behind a local interface, in response

    to receiving the packet via the virtual network device link.

48.   (Original) A system comprising:

  means for sending a first packet via a first link of a virtual link bundle if a

    destination identifier associated with the first packet identifies the virtual

    link bundle; and

  means for sending a second packet via a second link of the virtual link bundle if a

    destination identifier associated with the second packet identifies the

    virtual link bundle, wherein

    the first link is coupled to a first virtual network device sub-unit, and

    the second link is coupled to a second virtual network device sub-unit.

49.   (Original) The system of claim 48, further comprising:

  means for selecting the first link from a plurality of links comprised in the virtual

    link bundle, wherein

    the selecting comprises performing a hash-based algorithm.

50.   (Original) The system of claim 49, further comprising:

  means for appending a header to the first packet, wherein

    the header identifies which port of a plurality of ports received the first

      packet, and

the sending the first packet via the first link comprises sending the header via the first link.

51.   **(Currently Amended)** A system comprising:

means for receiving a packet, wherein

a destination identifier for the packet identifies an interface bundle, and the interface bundle comprises a first interface; and

means for detecting whether the packet was received via a virtual network device link;

means for ~~filtering~~ **dropping** the packet from a packet flow being sent via the first interface if the packet was received via [[a]] **the** virtual network device link.

52.   (Original) The system of claim 51, further comprising:

means for sending the packet via the first interface if the packet was not received via the virtual network device link.

53.   (Original) The system of claim 52, further comprising:

means for maintaining consistency between a lookup table comprised in a first virtual network device sub-unit and a second lookup table comprised in a second virtual network device sub-unit.

54.   (Original) The system of claim 52, further comprising

means for performing control protocol processing for the interface bundle at a primary controller comprised in a first virtual network device sub-unit, wherein

the first interface is comprised in the first virtual network device sub-unit.

55.   (Original) The system of claim 54, further comprising:

        means for managing a second interface of the second virtual network device sub-

                unit in response to information generated by the performing the control

                protocol processing, wherein

                the second interface is comprised in the interface bundle.

56.   (Original) The system of claim 55, further comprising:

        means for looking up a destination address of a second packet in a lookup table,

                and

        means for sending the sending packet via the first interface of the first virtual

                network device sub-unit instead of sending the packet via the second

                interface of the second virtual network device sub-unit if the lookup table

                returns the destination identifier.

57.   (Original) The system of claim 51, further comprising:

        means for learning that a source address of the packet is behind a local interface,

                in response to receiving the packet via the virtual network device link.

58.   (Original) A computer readable medium comprising program instructions
executable to:

        send a first packet via a first link of a virtual link bundle if a destination identifier

                associated with the first packet identifies the virtual link bundle; and

        send a second packet via a second link of the virtual link bundle if a destination

                identifier associated with the second packet identifies the virtual link

                bundle, wherein

                the first link is coupled to a first virtual network device sub-unit, and

                the second link is coupled to a second virtual network device sub-unit.

59.   (Original) The computer readable medium of claim 58, wherein the program
instructions are further executable to:

select the first link from a plurality of links comprised in the virtual link bundle, wherein

selecting the first link from the plurality of links comprises performing a hash-based algorithm.

60. (Original) The computer readable medium of claim 59, wherein the program instructions are further executable to:

append a header to the first packet, wherein

the header identifies which port of a plurality of ports received the first packet, and

sending the first packet via the first link comprises sending the header via the first link.

61. **(Currently Amended)** A computer readable medium comprising program instructions executable to:

detect reception of a packet, wherein

a destination identifier for the packet identifies an interface bundle, and

the interface bundle comprises a first interface; and

detect whether the packet was received via a virtual network device link;

~~filter~~ **drop** the packet from a packet flow being sent via the first interface if the packet was received via [[a]] **the** virtual network device link.

62. (Original) The computer readable medium of claim 61, wherein the program instructions are further executable to:

send the packet via the first interface if the packet was not received via the virtual network device link.

63. (Original) The computer readable medium of claim 62, wherein the program instructions are further executable to:

maintain consistency between a lookup table comprised in a first virtual network device sub-unit and a second lookup table comprised in a second virtual network device sub-unit.

64. (Original) The computer readable medium of claim 62, wherein the program instructions are further executable to:

perform control protocol processing for the interface bundle at a primary controller comprised in a first virtual network device sub-unit, wherein the first interface is comprised in the first virtual network device sub-unit.

65. (Original) The computer readable medium of claim 64, wherein the program instructions are further executable to:

manage a second interface of the second virtual network device sub-unit in response to information generated by performing the control protocol processing, wherein
the second interface is comprised in the interface bundle.

66. (Original) The computer readable medium of claim 65, wherein the program instructions are further executable to:

look up a destination address of a second packet in a lookup table, and
if the lookup table returns the destination identifier, send the sending packet via the first interface of the first virtual network device sub-unit instead of sending the packet via the second interface of the second virtual network device sub-unit.

67. (Original) The computer readable medium of claim 61, wherein the program instructions are further executable to:

learn that a source address of the packet is behind a local interface, in response to detecting reception of the packet via the virtual network device link.